

Keyhouse

HOUSE BUILDER NEWSLETTER

Quality Street

04



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Associate Director
Bewley Homes

Value of Certification

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with
Claire Curtis-Thomas
Chief Executive Officer
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Lovell Homes
discovers
the advantages
of Smartroof

What's New for House Builders?

We take a look at how the latest innovations from the Keystone Group are benefitting builders across the UK.



WELCOME

The positive news in 2018 had to be that house building remained the best performing sector in UK construction, with all residential work together representing the single largest sector. Of course, many questions remain unanswered as we draw ever closer to 2019 in the hope that any cliff edges for the UK economy will be avoided.



Sean Coyle
Chairman
The Keystone Group

> At the Keystone Group we continue to focus on investment in innovation as the best protection against all and any market swings, something which has served us well in the past and is amply demonstrated in our celebration this autumn of IG Lintels 60th anniversary. IG Lintels is at the forefront of steel lintel design, bringing new, cost effective options to house builders, helping them to deliver energy efficient homes.

We are meeting the challenges head on, investing in new manufacturing techniques to reduce labour content in our offsite solutions, so house builders can achieve more with less skilled labour onsite.

At the heart of our work lies the desire to make homes better, not only for the builder, but also for the owner, today and in years to come.

Our new daylighting solutions offer design freedom to create bright, healthy and desirable homes, appealing to increasingly discerning buyers seeking to experience true 'living' spaces.

Through partnership we will continue to focus on products for building better homes more efficiently. As always, our door is open. ■

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VOX POPS

Are you forecasting growth for 2019?



Lee Parry
Construction Director
Keepmoat Homes



Our growth plans for the business will see us delivering over 4,000 homes, 660 of which will come from our Midlands region, by the end of FY19.

To deliver this growth, and through our partnership with ilke Homes, we've already started incorporating the use of modular homes on our developments in Gedling and Shirebrook. The main benefit of this, from a construction perspective, is we're able to produce high quality, affordable new homes whilst maintaining our delivery schedule regardless of the weather.

Like others in our industry, the main challenges we're experiencing are the skills and materials shortages. However, we've already implemented various initiatives to address this. For example, as members of the 5% club, we've made a commitment that at least 5% of our work force will be made up of trainees, apprentices or graduates. Currently we're at 9% and have plans in place to continue encouraging and supporting people into the industry.



Rob Greaves
Senior Technical Manager
St Modwen Homes



We are continuing into 2019 with growth of 20-25% across our operation. There are many challenges to deliver this growth as we operate over a vast geographical area. However, we have plans in place to assist us with these challenges and we feel confident that our targets are achievable. The strength and knowledge of our existing staff will continue to play a key part along with ensuring that we supplement teams whilst also nurturing talent and progressing our "growing our own" program which focuses on training and progression.

Our subcontractors and suppliers are a key focus for us and we have rolled out action plans that will allow us to build solid relationships based on mutual trust and performance, with an aim of becoming the client of choice for our supply chain.

We are also focused on the whole customer journey and have recently employed a Customer Experience Director, Clair Bacchus, to help deliver a new approach to the house building industry.



Dan Corcoran
Senior Buyer
Pennyfarthing Homes



Our growth plans for the business will see Pennyfarthing increase the number of houses completed per year to over 200 homes a year over the next 3 years. This plan will effectively take us from being a small local builder to being a regional builder and we are excited about that prospect.

The biggest challenge we had in 2018 was the weather throughout the first quarter. We have also experienced ongoing material shortages on facing bricks and thermal blocks which is obviously a challenge to us and other builders. If the Government is serious about ramping up house building then steps must be taken to address the skills training issue and consider infrastructure bottlenecks.

There's got to be more focus on apprenticeships and training. There should be more apprenticeship training for younger people and we are now actively involved.



“

We pride ourselves on our prestigious homes and our current portfolio of homes range in price from £200,000 to around £1 million.



HOUSE BUILDER FOCUS

Quality Street

With this year’s turnover approaching £135 million, Hampshire based Bewley Homes is carving out a growing business with a focus on quality, backed by the financial strength of their PLC status. Associate Director Graham King gives us some insight on their success.



with

Graham King

Associate Director
Bewley Homes



> Tell us a bit about Bewley Homes

Bewley Homes was founded back in 1991 on the simple philosophy of building quality homes that people would aspire to own, located in highly desirable locations. This mission remains the cultural heart of our business today and our enviable reputation is built on this approach.

Bewley will achieve a £135 million turnover this year and whilst we are a Public Limited Company (PLC), the key to our success is that we remain independent and currently create around 250 private new homes every year. We pride ourselves on our prestigious homes and our current portfolio of homes range in price from £200,000 to around £1 million. >



How has your business developed in the last few years?

Bewley has grown significantly in the past 5 years, with an increase in turnover from £20 million to around £135 million expected this year. This dramatic growth has been possible because we are tremendously well-funded.

How does Bewley Homes differ from other house builders?

We believe it's the quality in material and the specification; we're very much design led. For example, we are currently in the process of trying to introduce a portfolio of standard house types but our approach to the specification is far from standard. We will make every effort getting the specification details exactly right.



Our attention to detail is exceptional, with careful selection of layouts and materials, including what bath we should select, what shower will we put in what door will we use, etc. We will only specify top quality products and I believe this really makes us stand apart from other builders.

For example, we occasionally buy a site from another developer; on one occasion we had to use their own house type but we put our own superior spec in to make it different. We had oak internal doors, where they had standard white painted doors. The kitchen and bathroom specifications also being higher.

How strong is your relationship with IG Lintels and the Keystone Group?

We go back a long time with IG Lintels, in fact, since we started building, which is about 30 years ago. So I think it's safe to say that we have a very strong relationship and as both companies have grown, we'll grow together.

How do you feel technology is changing or improving the industry?

Technology has been making a big impact, particularly on the energy efficiency side. We have engaged with solar panels, smart metering, ground source heat pumps, low energy lighting and air source which benefit us in terms of compliance but of course benefits the purchasers in energy costs and comfort within the home.

Most recently we've installed charging points for cars and I suppose that is the sort of feature we will be seeing a lot more of in the future.

What other methods of construction are house builders trialling as opposed to bricks and block?

I know a lot of the large house builders are looking at alternative methods as opposed to brick and block. There are numerous other methods such as thin joint blocks, hollow core clay block, obviously timber and metal frame housing alternatives. These methods are being used by house builders to overcome the skills shortage in the industry.

We believe “
it's the quality
in material and
specification;
we're very much
design led.

How do you overcome the skill shortage in the industry?

I think to bring back an apprenticeship scheme at some point has got to be the start. We currently have 4 apprentices, along with several other trainees. I know people like Redrow, Thames Valley and Taylor Wimpey are beginning to do graduate schemes. There needs to be an attempt to get people back in the industry. >





We encourage training at all levels and we have a member of staff doing a part-time Masters at Reading University, another is doing a degree through Southampton and another is studying Construction Management at Reading.

What can house builders do to really improve on quality?

Quality is always at the top of our agenda and I think about it a lot. One option is to avoid damage occurring to a lot of finishes in the house by having the items produced offsite and then brought to site at the last possible minute.

We have various checks before the house is handed over to a purchaser. We employ an outside agent to do our snagging but we also use in-house staff and they do pre-inspections and checks along with the guys onsite. But training is really important as well.

This needs to be done so tradesmen understand the levels of work required so we can ensure that poor workmanship is not accepted. The choice of material is also a major influence on finished quality - you can't buy too cheap, it will come back and bite you at some point.

What is your turnover forecast for the balance of 2018/2019 compared to recent years?

Well this year, we're expecting to total around £135 million, next year we will be aiming at £150 million, moving to £175 million in 2 years.

What's next for Bewley Homes?

What's next? Continued growth as you can see, expansion, possible new region, and new office because we are at bursting point here. We've got a scheme constructing a new office here as well. Obviously to expand over a geographical area as well. ■



PRODUCT INNOVATION

Limitless Design Possibilities

➤ Keystone's bespoke Special Steel Lintels provide an effective means of achieving complex shapes when designing buildings with character. A Keystone Special Lintel is ideal when shape, scale or unusual load requirements call for a bespoke approach to manufacturing.

Understanding the special lintel service affords the architect confidence that a partner is on hand to help them deliver the individuality of their designs. This removes the doubt from the designer if delicate detailing can be delivered onsite.



Typical applications include arches over front doors and windows and can be achieved in a variety of traditional styles.



Typical applications include arches over front doors and windows and can be achieved in a variety of traditional styles, from the wide Parabolic Arch to a pointed Venetian Arch. Alternatively, Keystone's team of design engineers can create a bespoke solution to accommodate any design.

There are several options including Special Lintels which go to site as bare steelwork and facilitate the creation of special openings utilising the skills of an onsite brick layer.

The second option, Brick Slip Feature Lintels, offer more of an offsite solution where the steel lintels can have brick slips applied in the factory and this approach is common for arches and more detailed designs. In this case, the brick is sourced from the project's main brick supply and slips are cut and applied in factory controlled conditions for optimum aesthetics onsite. ■



CASE STUDY

Brick Slip Feature Lintels



Private Dwelling

Tall Trees, Kent

Architect

Stephen Langer
Associates Ltd

Product Used

Brick Slip
Feature Lintels

Contractor

Ascent
Building Ltd

CASE STUDY

Indulge In Detail



Lintels to varied specifications, incorporating specially manufactured brick mullions, heads and Bullseye Brick Feature Lintels. The porch entrance required a Brick Feature Arch with brick on three sides. All of the brick slip products were manufactured in Keystone's factory controlled environment.

Products Used

Brick was collected from site and each brick was crafted, ensuring the decorative brick features captured the architect's vision.

The offsite manufacture of these bespoke solutions ensured optimum conditions for the bonding process and offered a level of quality and detail which would be much more difficult to achieve if produced onsite. ■



> Challenge

Tall Trees is a residential development in Kent. The complexity of the brick detailing within the architect's plans presented a significant challenge.

The project specified a range of brick features over a variety of opening shapes and sizes. One of the most striking features is a unique arch over the front porch with brick on three sides.

Solution

The variety of shapes and sizes of the brick features needed provided a challenge. If constructed onsite using traditional methods intricate brickwork at Tall Trees would have been extremely labour intensive.

The level of detail would have required skilled specialist labour onsite and working at heights. Onsite traditional methods can also be subject to delays due to adverse weather conditions. Keystone's technical department specified a number of pre-fabricated Brick Feature Arches and



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INDUSTRY VIEW

What Value is Third Party Certification?

In recent years the choice of building products in every sector has mushroomed as alternatives, including low cost Chinese look-alikes, have flooded onto the market, creating more choice but leaving buyers with very little security with regards to performance.



with

Claire Curtis-Thomas

CEO of the BBA



This scenario led many reputable manufacturers to seek third party certification and in the UK that inevitably means achieving the coveted BBA mark. To understand more about the value of certification, we invited Claire Curtis-Thomas, CEO of the BBA to introduce it in more detail and outline the challenges which lie ahead.

We are now regarded as global experts in many of the areas that we cover.





> **How did the BBA originate?**

The Agrément Board was formed as a government department in 1966 following a period when local authority purchasing was deemed to be failing to select products of appropriate quality. BBA was set up to assess the performance of these products and local authorities were then limited to only buying products that had been assessed.

A big change came in the 80's when BBA started working for private companies. So now the BBA is supplying a range of services and has the formidable challenge in terms of communicating with multiple communities, helping them understand the value that certification brings.

Today almost 200 people work within the BBA; including engineers, scientists and technicians. There is not a specialism that we don't cover. We have the privilege to work with companies like Keystone, who are enormously innovative and saying to them "right, how do we help you to get your innovative products onto the market, to give them the credibility they deserve from an impartial authority like the BBA."



Do you test everything in-house?

We carry out hundreds of tests at our extensive onsite facility, however, there may be some tests that we can't carry out, in which case we sub-contract those and of course, advise our clients. For example, we don't do any fire testing in-house, but fortunately the BRE fire test house is based between two of our testing properties, so everything can be handled very efficiently. We have very good relationships with all the fire facilities and we use their expertise to augment our own and they do the same. >



BBA certification is recognised globally. So, in addition to Europe, we have huge market profiles in the Middle East. We're also known in many Commonwealth countries.

We are now regarded as global experts in many of the areas that we cover. Our staff sit on British Standard Committees and also European Standard Committees. We are part of a global network of companies enabling us to undertake global projects together. At the moment we're working on magnesium oxide boards. Obviously, we've been working recently on external wall insulation as its performance is an issue with global impact. If problems are identified then we will get together and decide what needs to be done, and then seek to influence the development of legislation in different countries to ensure that we've got a comparable global standard.

Is a BBA certification only recognised in the UK?

No. BBA certification is recognised globally. So, in addition to Europe, we have huge market profiles in the Middle East. We're also known in many Commonwealth countries. British certification is still highly valued, particularly in countries in which Britain had previous involvement. Qatar would be an example in the Middle East where the BBA were specified in government contracts for the 2020 World Cup stadiums. They wanted BBA certification and expressed their trust in the certification process which gives them confidence when purchasing the BBA certified products for this massive scheme.

I'm off to the Middle East before the end of the year, and will be visiting some of the buildings where BBA products have been used, so I'm really looking forward to that. I get an enormous sense of pride when I see products that have been assessed by us and then used in beautiful buildings where they are doing the jobs that we said they could do.

What does third party certification mean?

Third party certification is absolutely vital because if it wasn't there then people would be left to effectively declare their own performances, and in the world that we live in today that is simply not good enough. It's about having an organisation that can lead the way in terms of expertise; standing up and proclaiming the qualities of that product on behalf of that company and doing so unequivocally.



David Grace, Sales Director for Keystone Lintels, receives the BBA certificate for Hi-therm+ Lintels.

Who are you engaging with in the construction market?

We are talking to government departments every week; we're talking to local authorities, housing associations, insurance companies, lenders, everybody and anybody who is connected to construction. They're talking to us because they want impartial and independent advice on product procurement, and about the emerging landscape in construction. They may also want to know that if they're going to invest in new construction technologies that they are right to have confidence in those technologies.

What value does third party certification bring manufacturing businesses?

What it means for you as a business is that you don't have to defend your product or seek to persuade people about the adequacy of its performance, because what you can say to them is "we have a BBA certification for this product", and you've achieved your objective of credibility.

We are now regarded as global experts in many of the areas that we cover.



BBA certification conveys a message about the quality, performance and durability of the product and about where your product stands relative to loads of other products. Without this third party certification you can still go to market and claim "we're better than the competition" but, of course, the first thing the buyers will say is "prove it".

What do customers gain when they buy a BBA certified product?

Customers can buy with confidence, so they know what they're getting. If I look at the Keystone literature, it's about endorsements from your customers, and they are choosing to buy your products because they are quality, outstandingly good products and fit for purpose, but they are also products backed by third party certification, so customers can trust them.

What is next for the BBA?

We have certified five and a half thousand products, so our products are everywhere. Currently our certifications are reviewed every 3 years maximum and we want our certificates to be up-to-date with current regulations on the very day you look at them. To meet this challenge we need to reconfigure how we hold and manage data, so we can connect with government departments, enabling any changes in the rules and regulations to be fed straight into our certification. We are working on a system which will automatically flag up when something is out of date, so we can immediately advise our clients to make sure that that product is brought back up to spec and complies with all the current regulations.

We want to connect our databases to global databases. We want to be able to extend the advice to architects and specifiers so that we're offering not just information about a product but we're looking at how that product actually works with other products. Architects are now looking for more comprehensive solutions, where they can be informed about all the other products that are needed for a building detail and have confidence that all the parts involved are equally well certified. Specifiers and architects are also telling us they would like our certifications to include installation specifications for the products.

So this is a great challenge but because we are a non-profit distributing company we reinvest all our profits into R&D activities, so this is a big research and development project for us and it's one we're going to be working on over the next 3 years. ■



We have the privilege to work with companies like Keystone, who are enormously innovative.

Keystone's BBA approved Hi-therm+ Lintel





PRODUCT INNOVATION

New Daylight Ideas add Value and Impact



with

Matthew King

Sales Director
Keylite Roof Windows

Homebuyers are always looking for that little bit of “wow” factor which makes one house stand out from all the others. Now a range of new installer friendly daylight options that add value to new homes by transforming living spaces are available to house builders. Keylite’s Matthew King tells us more.

Keylite’s house builder support team is on hand to assist with design queries and offer support when site teams encounter the product for the first time.



Keylite’s Dormer System creates the ultimate daylighting experience.

➤ No matter how interior decoration trends change, the essential ingredient which designers always crave is natural light. Creating a sense of space in even the smallest new house is enhanced by light and the effect of overhead glazing is proven to be far greater than that achieved from adding additional vertical glazing in windows. For many years roof windows have been the most efficient method of bringing more light into a home but now there are additional products for both pitched and flat roof applications.

Keylite’s new Dormer System has re-invented how roof windows can be used to create maximum impact. It brings the same advantages as a traditional dormer, in terms of space and head room, but adds visual appeal with a better view of the sky and can transmit up to three times more light into the room than a roofed dormer. The new Keylite Dormer System creates that desired “wow” factor by offering a fresh air experience, with options for manual or electric opening and its bright white finish creates the brighter, whiter interior which appeals to so many home buyers.

Ease of installation is a growing concern to builders feeling the squeeze on availability of skills, so it is particularly reassuring to know that all of these new daylighting options have been designed for easy installation on site, without the need for any specialist skills.

House builders have always experimented with designs that can add additional floor space cost effectively. Adding a single storey feature to the rear of the house presents a number of challenges to new build, not least the effect on the ability of light to penetrate deeper into the home.

In the past, options to elevate this on flat roofs have been too expensive or complex to install for the volume house builder. Keylite, however, now has a modern Roof Lantern solution which provides daylighting on a grand scale to create outstanding living spaces. This new product is packed with, innovative features which, importantly, deliver excellent thermal performance, with a range of options to meet builders' needs.

Again, practicality lies at the heart of Keylite's range and the new lantern is designed for ease of installation, without any special requirements for additional specialist labour. The challenge for house designers is to embrace these new opportunities which, potentially, add much greater value to the property in the public's eye than the additional cost to the builder. ■



Keylite's modern Roof Lantern solution provides daylighting on a grand scale.



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HOUSE BUILDER FOCUS

On Your Bike!

Ambitious growth is planned as New Forest Developer Pennyfarthing Homes aims to use its family values to latch onto demand on the South Coast.



with

Dan Corcoran

Senior Buyer
Pennyfarthing Homes



Tell us a bit about Pennyfarthing Homes

Pennyfarthing Homes is a family business with a strong reputation based on over 40 years of building homes to the absolute highest standards. For many years we focused purely on bespoke, high-end properties, ranging from £750k to £1m. But more recently we have expanded our activities to include larger sites with a range of standard house types.

Local authorities certainly favour the construction of volume housing at the moment and our approach is now to buy larger sites, which enable us to build more houses but still retain the unique relationship with the customer that comes from being a family run business. Our land bank includes some prestige sites so we still have the ability to build further bespoke properties in the future.

How has your business developed in recent years?

We have moved from building just 5-20 big houses each year to our current position where we will build around 100 houses and our turnover is around £50m. Over the next 3 years we plan to increase this number to 200 homes a year. This plan will reinforce our position as one of the leading regional house builders.



What are you doing to stand out from the competition?

Even though we are standardising things a little bit, we always want to give our houses a distinctive touch. Our designs include bays and different features on the elevations because we always want to try and stand out from other house builders. We believe the public can differentiate our builds from other house builders and realise that these subtle design features set us apart.



How is your relationship with the Keystone Group?

Well I've been here 3 years and it's just got stronger and stronger really. I find Keystone very helpful and very responsive when required and they provide great customer service to our business.



Hi-therm has impacted positively on our SAP ratings and eliminated the need for PV Panels.

How do you rate the Hi-therm Lintel?

Pennyfarthing was one of the first to trial the Hi-therm Lintel and it's been a great success. Hi-therm has impacted positively on our SAP ratings and eliminated the need for PV Panels and in some cases, we can eliminate other energy related systems which has resulted in overall cost savings for ourselves and also follows our ethos of 'fabric first'. The fact that it is just part of the unseen fabric is great because from the customers' point of view, it eliminates systems which would require maintenance and can be a hassle to operate.

I realise some people may look at the price of Hi-therm on its own compared to a normal lintel and think 'they seem expensive', but you have to factor in the savings on things like PV panels on the roof etc.

We are now converting to the Hi-therm+ Lintel which I think is actually a better design than the original Hi-therm. It's obviously a cost saver to the business, which is great.

We are also pleased with the Keylite Roof Windows which we recently trialled on a high spec development, with great results. We plan to specify these across the board on all future sites.



Pennyfarthing Homes is a family business with a strong reputation.

What way is technology and alternative construction methods changing the industry?

I think BIM is impacting design and generally streamlining everything, which helps because everyone wants everything quicker.

Offsite seems to be growing rapidly, however we still do most of our work onsite. However, we have used Keystone's Brick Slip Feature Lintels in the past and they were a pretty good product for us.

I think also a lot of people are going back to timber frame now because it's a lot quicker, you can get it straight up and get the roof on it in about 3 or 4 weeks. Modular construction also seems to be more and more popular. ■



Build Speed

Installed in hours
not weeks

Health & Safety

Multiple benefits

Site Management

Multiple benefits

Build Quality

Factory quality

Cost

Fixed price assurance

PRODUCT INNOVATION

Shaping the Future of Offsite

Ask any house builder about the challenges in the industry today and the response will most likely involve labour availability, skilled or otherwise. IG Elements continues to invest in offsite efficiency to help house builders meet these challenges.

> Skills are the essential element in house building which provide the quality and efficiency essential for a successful business. The government has now injected £22million into the Construction Skills Fund which it hopes will loosen the skills shortage stranglehold over the next couple of years, but the reality on the ground is currently

still an acute shortage and anticipation of future Brexit supply pressures.

In the face of these challenges, most house builders have already engaged with some type of offsite system, while others are pushing further down this route to reduce their reliance on skills onsite. >



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igelements.com



IG Elements is at the forefront of the offsite manufacturing sector and supplies many of the UK's leading house builders with a range of factory built components.

Having experienced the advantages of removing complex detailing from site, builders are now discovering the additional benefits which include; enhanced health and safety plus reduced waste onsite. IG Elements is a great example of an entry point into offsite products which can be adopted quickly into a build with the minimum amount of disruption but still make a big impact on the build's quality.

IG Elements Invests for Offsite Efficiency

IG Elements has made a major investment in new modern methods of moulding which will help increase quality and volume. Resin Transfer Moulding (RTM) is a closed-mould process for manufacturing high performance composite components, aimed at increasing manufacturing efficiency and the reduction of waste.

This major investment will enable house builders to enjoy the key benefits of offsite including build quality, enhanced energy efficiency and a reduction of onsite risks to the health and safety of staff.

“
The offsite craftsmanship of IG Elements products will provide the finishing touch to your project.”

First Impressions Count

IG Elements offers the house builder a range of offsite manufactured products, helping to reduce the reliance of onsite labour, speed up build times and provide cost certainty.

In a tough market, first impressions count and offsite components can add considerable kerb appeal to volumetric housing. Products include the Coverlite Canopy, the Redi Dormer, Easy Bay, Rapid Stack and Preform Surrounds. ■





CASE STUDY

Lovell Homes - Smartroof

House Builder

Lovell Homes

Site

Heath Farm, Holt,
plots 200 & 205

Architect

Chaplin Farrant
Limited

Product Used

Eaves to Ridge
Smartroof System

Build Speed

Installed in hours
not weeks

Health & Safety

Multiple benefits

Site Management

Multiple benefits

Build Quality

Factory quality

Cost

Fixed price assurance



Telephone
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smartroof.co.uk

CASE STUDY

Smart Money

Lovell Homes followed their instincts and explored new methods to find a more efficient roofing solution to meet the growing demand for their 'room in roof' house types.



> Challenge

Lovell Homes previously used traditional methods in the construction of its three storey homes, in a process involving masonry gables, attic trusses and hand-cut pediments. This process required a time allocation of up to four weeks in the build schedule, due to involvement of multiple sub-contracted trades and service suppliers.

Maintaining maximum site safety was a concern, due to the extensive working at height plus the risk of collapse of masonry gable walls during installation. Mitigation methods for these safety issues required the use of both internal and external scaffolding with associated costs. Lovell was interested in alternative build methods which could simplify the roof construction and enhance onsite safety, whilst saving time in the build plan.

Solution

Smartroof is a radically different solution which is produced offsite and was installed on these two sets of semi's at Lovell's Heath Farm site in just two days, saving weeks from the previous build schedule.

This patented NHBC approved system replaced the internal block gable with a pre-insulated timber frame spandrel panel, which effectively removed the risk of collapsing masonry. The self-spanning panels replaced the purlins and ridge beam to create an internal space completely free from structural intrusions. The Smartroof 'room in roof' solution delivered benefits; in terms of site safety, thermal performance, consistent quality and speed of construction.

As an alternative to the attic trusses, Smartroof delivered factory assembled roof panels directly to site where they were craned safely into position and are supported by the spandrels. This process removed the need for internal birds' nest scaffolding, traditionally required for safe working on attic trusses and the pediment roof can be safely constructed over the Smartroof panels. >





I was very impressed with the entire Smartroof process from design to installation and I will definitely use the system on future projects.

Chris Nelson

Contracts Manager, Lovell Homes



Excellent build quality and thermal performance for the roof was assured as the insulation materials and vapour control layer were applied in controlled factory conditions and were therefore unaffected by any adverse conditions onsite.

Since all Smartroof components were delivered to site for craning on the same day, considerable cost savings were made compared to the traditional build scenario which required multiple cranes and the additional site management issues. This solution also delivered additional benefits to Lovells; as Smartroof also provided the crane lift plan and crane lift plan drawing, together with a CPCS qualified team, consisting of an operator, supervisor and slinger banksman.

Product Used

The Eaves to Ridge Smartroof system is a panelised cassette system which spans from the eaves to the ridge. This type of roof is typically used where the span from gable to gable is greater than 5.4m. The Eaves to Ridge roof includes a box beam, or steel beam, running from gable to gable, which the panels are connected to via a unique engineered patented bracket system, to aid speed of installation. This roof, similar to the gable to gable panels, can also be designed to achieve U-values required by the house builder.

The spandrel pockets on which the box or steel beam sit are completely sealed after installation, to ensure no visible air gaps to satisfy room in roof U-value requirements. ■



Private Dwelling

Church Road
Belfast

Architect

Hall McKnight
Architects

Product Used

Brick Slip
Soffit Panels
Ø Brick Slip
Lintels

Contractor

Strong
Construction
Limited

CASE STUDY

Sharp Styling

The resurgence of brick as the material of choice for modern homes is fuelling demand for high quality detailing. In response, IG Masonry Support is leading the way with a range of innovative offsite solutions which enable house builders to match the architect's vision.



Challenge

The property on Church Road presented very complex brickwork elements. Attentive to every detail, each elevation is composed of distinct forms, defined by deep recesses in the façade. The first floor protrudes out above the entrance to the property. The brick reveal on the underside of the cantilever required a brick slip cladding system in order to achieve the detailing specified within the architect's designs. IG Masonry Support was approached for a multitude of prefabricated brick slip soffit panels to achieve the bond pattern required for the 20m² masonry soffit.

Solution

The property on Church Road demonstrates an urban approach to modern architecture. Brickwork elements formed an integral part of the design, utilising a single red brick type throughout the development. The underside of the first storey at the property's entrance required intricate brick detailing. IG Masonry Support facilitated the seamless continuation of the brickwork onto the soffit. IG designed a brick soffit panelling system that could easily achieve the masonry soffit. The series of interconnecting panels provided a lightweight prefabricated solution allowing a fully clad 20m² brick soffit.



Telephone
01283 200 157

Visit
igmasonrysupport.com

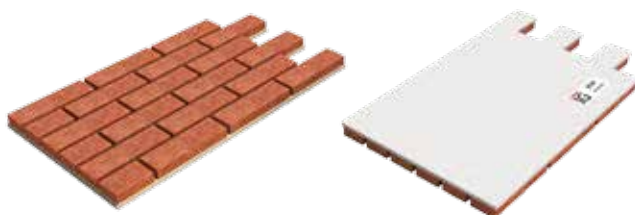


The design and realisation of this house was impressive. The brickwork elements were well proportioned and integrated to dramatic effect.



Product Used

IG Masonry Support designed 26 brick clad soffit panels to achieve the brick detailing required for the deep soffit reveal above the entrance. The prefabricated units were manufactured offsite and delivered complete with bricks bonded. The lightweight panels facilitated fast and efficient installation, allowing the seamless continuation of brick on the underside of the cantilever. Achieving a seamless transition between onsite and offsite building materials, the interconnecting soffit panels collectively achieved the brick soffit detail. Strong Construction Limited installed the units, fixing them to the timber substructure with screws. The stainless steel screws were positioned within the mortar joints and hidden once pointed. ■





IG DIAMOND ANNIVERSARY

60 Years of Innovation

Defining the way we build today

IG founded	IG invents the first open back lintel	IG introduces first insulated lintel	IG becomes part of the Keystone Group	1st steel lintel company to be awarded ISO 14001	Hi-therm Lintel launched	Overall Housebuilder Product of the Year Hi-therm Lintels	Housebuilder Product Awards Hi-therm Lintels	Best Building Fabric Product, Housebuilder Product Awards Hi-therm+ Lintels
1958	1967	1984	2006	2010	2011	2013	2014	2018



Millions of UK homes have been built using steel lintels as a result of IG's innovation.



When it comes to steel lintels, the name IG will be familiar to most builders, but not all may realise that IG Lintels in Wales was the company that brought the first steel lintels to the market.

So now, sixty years on, IG has earned the remarkable right to claim that it has defined the way we build houses today. But, of course the story doesn't end there, because over the past sixty years, IG has continued to innovate and now leads the way in energy efficient lintels.



The latest development, and already an award-winning product, was launched earlier this year in the form of the Hi-therm+ Lintel. This high performance lintel tackles the issue of thermal bridging, through the application of an innovative composite design which combats thermal bridging to deliver thermal efficiency up to five times greater than a standard steel lintel.

The relevance to the builder comes in the assistance which this new lintel technology brings to compliance with SAP. As a fabric first material, this has the ability to reduce a house design's reliance on secondary, bolt on technologies which can often interfere with the integrity of the architectural design. The additional performance within SAP could also remove the need to increase cavity width from 100mm to 150mm, which, over the floor plan of the building, saves valuable interior space.

IG has developed additional means of support for builders, including a helpful Psi Value Calculator tool on its website, which enables designers to compare the thermal performance of differing wall construction options when using Hi-therm+. ■





IG

CELEBRATING



YEARS

IG Lintels celebrated its Diamond Anniversary at the Hilton Cardiff on 4th October. Thank you to all who celebrated with us.





PRODUCT INNOVATION

What's New?



with

Eithne Kelly

Chief Executive Officer
The Keystone Group

Eithne Kelly, CEO of the Keystone Group gives a round up of the latest products for house builders. Product innovation continues at pace within the Keystone Group. Featured below are just a few of the new products available in our range to address the challenges facing house builders.

Launched in January this year, Hi-therm+ has already gained recognition, having won Best Building Fabric Product at the 2018 Housebuilder Product Awards.



Hi-therm+ LINTELS

Thermally Efficient Lintel

Hi-therm+ offers a fabric first solution to reduced carbon emissions.

Keystone has reengineered the Hi-therm Lintel to offer even greater practicality to builders. The composite design of the award-winning Hi-therm+ successfully reduces thermal bridging in the fabric of the building, allowing house builders to achieve SAP compliance without using bolt on renewables or other expensive energy efficiency measures.

Launched in January this year, Hi-therm+ has already gained recognition, having won Best Building Fabric Product at the 2018 Housebuilder Product Awards.



keylite

Solar Operated Roof Window

Just because you can't reach a roof window doesn't mean you can't open it for fresh air.

The new Solar operated Polar PVC Roof Window is powered by solar energy and works independently of any mains electricity supply, giving users finger tip control of the window.

Keylite Solar windows will close automatically in the event of rain and the solar cell stores up energy for use during day or night. Keylite Solar is just the latest part of the Polar White PVC range to be made available to merchants and shares the same maintenance free, moisture proof performance which is proving so popular with builders.



**B.O.S.S.® offers
90% installation time
savings onsite and
is 70% lighter than
concrete alternatives.**

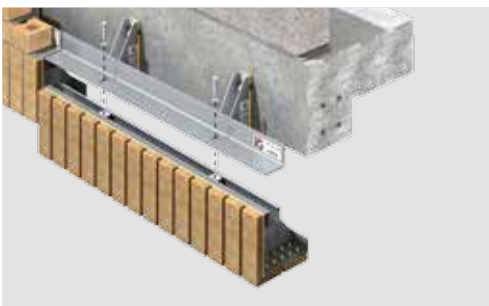


Brick On Soffit System

B.O.S.S.® offers 90% installation time savings onsite and is 70% lighter than concrete alternatives.

B.O.S.S.® is a clever masonry support system which makes achieving deep brick soffits and intricate brick patterns around window heads and openings quicker, easier and more cost efficient.

B.O.S.S.® creates the illusion of floating beams of brickwork and blends seamlessly with surrounding brickwork.



Need Document Q compliance?

Depending on the location of roof windows in your house designs, you may be required to meet the requirements of Document Q in relation to the standards for doors and windows to resist physical attack by a burglar.



While roof windows are not known to be a typical point of entry Keylite has developed the QCP Centre Pivot range which is tested to the required standard PAS 24:2012 and offers enhanced levels of security for added resistance to external entry attempts.

These windows feature additional and upgraded locking points at both the top and bottom of the window sash. In addition, the build specification of the window is upgraded, as screw fixings in key areas are replaced by bolts for additional strength.

Up to two additional locking handles are added at the base of the window, in contrast to a standard centre pivot roof window which has a single top handle.

Measures are also taken to secure the glazing unit within the frame, preventing easy access by removal of the glass.

Please contact Keylite for more details about the QCP enhanced security roof window.

Telephone
01283 200 158

Visit
keyliteroofwindows.com

Find out more
hithermlintels.com

Hi-thermTM LINTELS

We've **cracked** it...



The **low cost** solution
for reduced carbon emissions

IG
STEEL LINTELS

DIAMOND ANNIVERSARY

CELEBRATING

6 YEARS